Lehigh Faculty Meeting - Budget Discussion

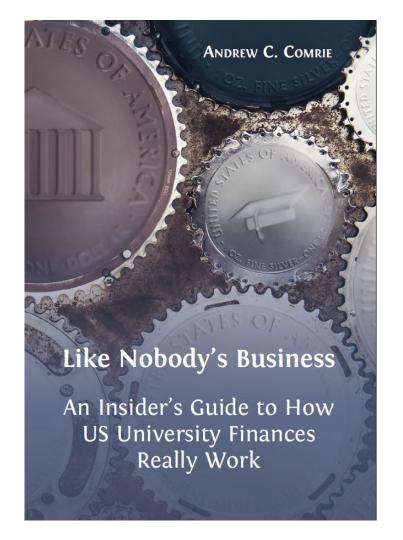
Nathan Urban and Pat Johnson

Why this is important

A better understanding of budgets and finances will allow faculty to make better decisions about their own work

Our financial model should align with our mission and we are always trying to adjust this alignment

As we enter strategic planning we will also be thinking about how we support the things that we need to do to be a successful university.



Outline

- Revenue sources
- Expenditures
- Budget model and process
- Faculty salaries

Lehigh Revenue Sources FY 2022 (budgeted)



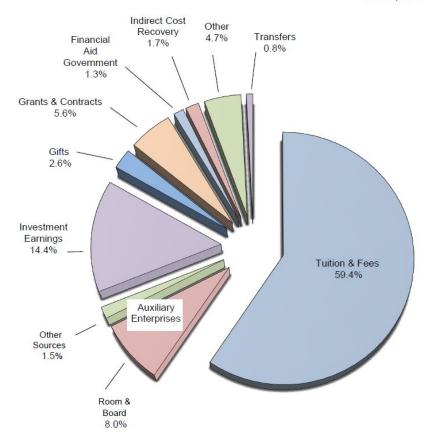
\$580,429,250

Main revenue sources:

- 70% of revenue is from gross tuition + room and board + other auxiliaries (e.g. parking, bookstore, etc)
- 17% is from return on endowment and current year gifts
- 7% is direct and indirect funding of research

Here tuition revenue is "gross tuition" (before financial aid)

Financial aid is ~\$139M/year - coming mostly from the operating budget. So total revenue considering tuition as net tuition = \$440M



Where we fall in the spectrum of HE

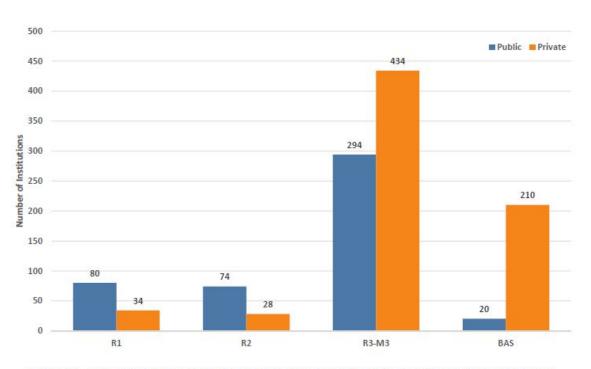


Figure 1.2. Number of public and private institutions in each Carnegie category of the data set used for analysis. See text for details. Source: IPEDS (2020).

We are a typical (small-ish) private R2

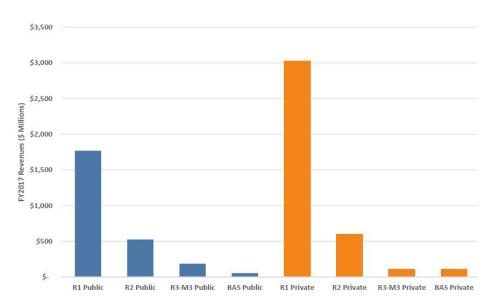
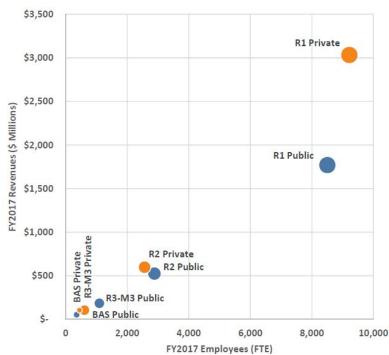
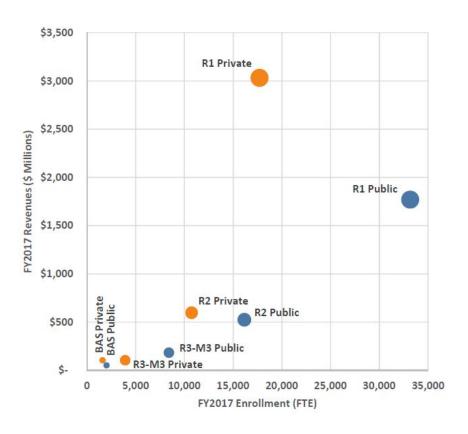


Figure 2.1. Average total institutional budget (FY2017 non-hospital revenues) for the universities and colleges in the data set, by Carnegie classification and control. Source: IPEDS (2020).

Tuition revenue is net tuition - in 2017 Lehigh revenue was \$384M

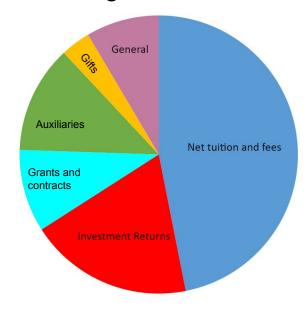


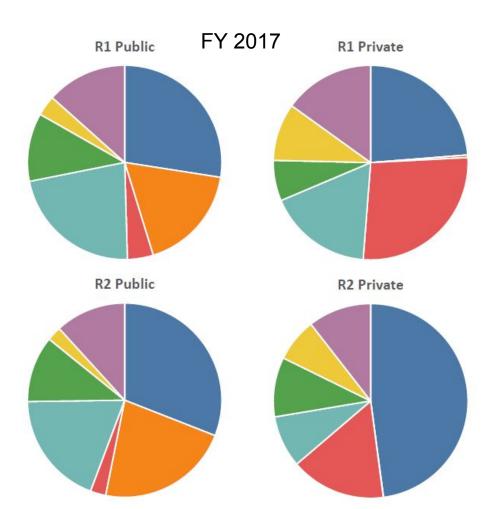
We are a typical (small-ish) private R2



Revenue Sources (tuition as net)

Lehigh FY 2022





Tuition & Fees
 State Appropriations
 Investment Income
 Grants & Contracts
 Auxiliaries

Gifts
Other

Revenue Trends

Ten Year trends

	FY 12		FY 13		FY 14		FY 15		FY 16		FY 17		FY 18		FY 19		FY 20		FY 21		FY 22	
	Actual		Actual		Actual		Actual		Actual		Actual		Actual		Actual		Actual		Actual		Permanent Revised Budget	
Tuition & Fees									1										1			
Fall/Spring Tuition																						
Undergraduate	\$192.8	57.4%	\$200.1	56.6%	\$208.7	57.0%	\$219.0	58.6%	\$227.3	60.5%	\$236.5	61.6%	\$248.3	61.2%	\$256.9	63.3%	\$275.9	68.2%	\$266.1	69.7%	\$295.8	67.3%
Graduate	\$22.0	6.5%	\$24.5	6.9%	\$26.3	7.2%	\$26.3	7.0%	\$26.7	7.1%	\$28.1	7.3%	\$27.8	6.8%	\$26.2	6.5%	\$24.9	6.2%	\$25.8	6.8%	\$28.9	6.6%
Summer Session	\$7.7	2.3%	\$8.0	2.3%	\$8.8	2.4%	\$8.5	2.3%	\$8.7	2.3%	\$8.9	2.3%	\$9.6	2.4%	\$9.4	2.3%	\$9.3	2.3%	\$11.2	2.9%	\$8.9	2.0%
Distance Education	\$2.6	0.8%	\$2.7	0.8%	\$2.8	0.8%	\$2.7	0.7%	\$2.7	0.7%	\$2.4	0.6%	\$2.6	0.6%	\$2.7	0.7%	\$3.1	0.8%	\$4.1	1.1%	\$2.7	0.6%
Other Fees	\$5.9	1.8%	\$6.3	1.8%	\$5.5	1.5%	\$6.0	1.6%	\$6.5	1.7%	\$7.1	1.8%	\$8.2	2.0%	\$8.4	2.1%	\$8.1	2.0%	\$6.4	1.7%	\$8.7	2.0%
Total - Tuition & Fees	\$231.0	68.8%	\$241.6	68.3%	\$252.1	68.8%	\$262.4	70.2%	\$271.9	72.4%	\$283.0	73.7%	\$296.5	73.1%	\$303.7	74.8%	\$321.3	79.5%	\$313.6	82.2%	\$344.9	78.4%
Financial Aid	(\$80.2)		(\$81.9)		(\$85.2)		(\$89.2)		(\$93.8)	10000	(\$98.7)		(\$107.1)		(\$115.7)		(\$126.1)		(\$125.1)	tion torus	(\$138.7)	
Net - Tuition & Fees	\$150.8	44.9%	\$159.7	45.1%	\$166.9	45.6%	\$173.2	46.3%	\$178.1	47.4%	\$184.3	48.0%	\$189.4	46.7%	\$188.0	46.3%	\$195.2	48.3%	\$188.5	49.4%	\$206.2	46.9%
Auxiliary Services	\$39.9	11.9%	\$47.3	13.4%	\$46.8	12.8%	\$47.9	12.8%	\$50.1	13.3%	\$50.3	13.1%	\$50.4	12.4%	\$52.2	12.9%	\$38.7	9.6%	\$22.6	5.9%	\$55.0	12.5%
Investment Returns	\$66.0	19.7%	\$69.2	19.6%	\$72.6	19.8%	\$74.5	19.9%	\$76.9	20.5%	\$78.6	20.5%	\$80.0	19.7%	\$84.4	20.8%	\$85.9	21.3%	\$84.2	22.1%	\$83.7	19.0%
Gifts for Operations	\$14.5	4.3%	\$14.1	4.0%	\$16.8	4.6%	\$16.1	4.3%	\$16.9	4.5%	\$15.0	3.9%	\$16.8	4.1%	\$17.4	4.3%	\$13.9	3.4%	\$13.7	3.6%	\$15.3	3.5%
Grants and Contracts	\$46.9	14.0%	\$51.4	14.5%	\$46.9	12.8%	\$44.5	11.9%	\$37.4	10.0%	\$39.0	10.2%	\$39.4	9.7%	\$39.2	9.7%	\$34.7	8.6%	\$40.2	10.5%	\$42.2	9.6%
General (Athletics, Zoellner, Departmental Funds, Appropriations In)	\$17.6	5.2%	\$12.1	3.4%	\$16.3	4.5%	\$17.5	4.7%	\$16.1	4.3%	\$16.7	4.3%	\$29.5	7.3%	\$24.7	6.1%	\$35.8	8.9%	\$32.5	8.5%	\$37.3	8.5%
Net Revenue	\$335.7		\$353.8		\$366.3		\$373.7		\$375.5		\$383.9		\$405.5		\$405.9		\$404.2		\$381.7		\$439.8	

Revenue change from FY13 to FY22 - w/o adjusting

for inflation)

Total 24% growth (2.2%/year)

- UG tuition (gross) +48%
- UG enrollment +10%
- Grad tuition (gross) +18%
- Grad enrollment -15%
- Financial aid +69%
- Net tuition +29%

FTEs

- TT Faculty +8%
- Total enrollment +3.7%

	FY 13 Actual		FY 22 Budget		% Change FY13 to FY22
Tuition & Fees					
Fall/Spring Tuition					
Undergraduate	\$200.1	56.6%	\$295.8	51.1%	48%
Graduate	\$24.5	6.9%	\$28.9	5.0%	18%
Summer Session	\$8.0	2.3%	\$8.9	1.5%	11%
Distance Education	\$2.7	0.8%	\$2.7	0.5%	-2%
Other Fees	\$6.3	1.8%	\$8.7	1.5%	38%
Total - Tuition & Fees	\$241.6	68.3%	\$344.9	59.6%	43%
Financial Aid	(\$81.9)		(\$138.7)		69%
Net - Tuition & Fees	\$159.7	45.1%	\$206.2		29%
Auxiliary Services	\$47.3	13.4%	\$55.0	9.5%	16%
Investment Returns	\$69.2	19.6%	\$83.7	14.5%	21%
Gifts for Operations	\$14.1	4.0%	\$15.3	2.6%	9%
Grants and Contracts	\$51.4	14.5%	\$42.2	7.3%	-18%
General (Athletics, Zoellner, Departmental Funds, Appropriations In)	\$12.1	3.4%	\$37.3	6.4%	208%
Total Revenue (Tuition as Net)	\$353.8		\$439.8		24%
Total Revenue (Tuition as Gross)	\$435.7		\$578.5		33%

Our growth has been slower than "peers"

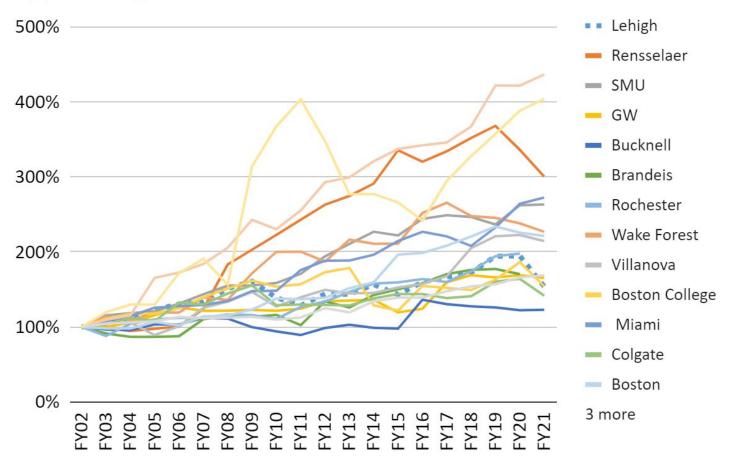
Revenue (2013-2018): Lehigh +2.2% annual rate vs + 4.2% average for <u>all privates</u>

Undergrad FTEs (2016-2020): +2% = 17th/26 self-identified peers

Grad FTEs (2016-2020): -10% = 26th/26 self-identified peers

MS degrees awarded (2010-2020): -11% = 25th/26 self-identified peers

Application growth



Peer Comparison UG Enrollments (Source: IPEDS)



Institution name	FY16	FY17	FY18	FY19	FY20	5 Year % Change	CAGR	Lehigh Rank
Lehigh University	5,075	5,080	5,075	5,047	5,178	2.0%	0.5%	17th out of 26
George Washington University	11,157	11,504	11,999	12,546	12,484	11.9%	2.8%	
Georgetown University	7,562	7,453	7,463	7,459	7,513	-0.6%	-0.2%	
University of Miami	11,060	10,792	10,832	11,117	11,307	2.2%	0.6%	
Emory University	6,867	6,861	6,937	7,086	7,118	3.7%	0.9%	
Northwestern University	8,839	8,791	8,700	8,642	8,682	-1.8%	-0.4%	
University of Notre Dame	8,462	8,530	8,576	8,617	8,732	3.2%	0.8%	
Tulane University of Louisiana	7,841	7,924	7,871	7,920	7,980	1.8%	0.4%	
Boston College	9,796	9,870	9,921	9,927	9,901	1.1%	0.3%	
Boston University	17,932	17,944	18,080	18,515	17,983	0.3%	0.1%	
Brandeis University	3,621	3,608	3,635	3,639	3,688	1.9%	0.5%	
Northeastern University	13,697	13,473	13,825	13,909	14,202	3.7%	0.9%	
Tufts University	5,290	5,508	5,541	5,643	5,907	11.7%	2.8%	
Colgate University	2,853	2,882	2,873	2,958	2,980	4.5%	1.1%	
Cornell University	14,315	14,566	14,907	15,182	15,043	5.1%	1.2%	
Rensselaer Polytechnic Institute	5,864	6,265	6,366	6,628	6,241	6.4%	1.6%	
University of Rochester	6,304	6,386	6,546	6,535	6,780	7.6%	1.8%	
Wake Forest University	4,871	4,955	5,102	5,225	5,287	8.5%	2.1%	
Bucknell University	3,569	3,571	3,611	3,597	3,627	1.6%	0.4%	
Carnegie Mellon University	6,049	6,283	6,533	6,589	6,618	9.4%	2.3%	
University of Pennsylvania	11,588	11,716	11,716	11,851	11,872	2.5%	0.6%	
Villanova University	6,977	6,999	6,950	6,917	6,865	-1.6%	-0.4%	
Brown University	6,652	6,926	6,988	7,043	7,160	7.6%	1.9%	
Vanderbilt University	6,883	6,871	6,885	6,861	6,886	0.0%	0.0%	
Rice University	3,910	3,893	4,001	3,992	3,989	2.0%	0.5%	
Southern Methodist University	6,411	6,521	6,452	6,479	6,710	4.7%	1.1%	
Peer Totals	198,370	200,092	202,310	204,877	205,555		0.9%	

Peer Comparison Grad Enrollments (Source: IPEDS)

Institution name	FY16	FY17	FY18	FY19	FY20	5 Year % Change	CAGR	Lehigh Rank
Lehigh University	1.979	1,979	1,942	1,802	1,775		-2.7%	26th out of 26
George Washington University	15,055	15,655	15,974	15,626	15,330	1.8%	0.5%	
Georgetown University	10,897	11,072	11,542	11,745	12,080	10.9%	2.6%	
University of Miami	5,725	5,952	6,171	6,214	6,504	13.6%	3.2%	
Emory University	6,921	7,206	7,326	7,372	7,297	5.4%	1.3%	
Northwestern University	12,816	13,032	13,308	13,485	13,766	7.4%	1.8%	
University of Notre Dame	3,830	3,863	3,891	3,990	3,951	3.2%	0.8%	
Fulane University of Louisiana	4,644	4,657	4,513	4,726	4,943	6.4%	1.6%	
Boston College	4,558	4,596	4,707	4,793	4,846	6.3%	1.5%	
Boston University	14,226	14,751	15,275	16,142	15,737	10.6%	2.6%	
Brandeis University	2,131	2,121	2,086	2,161	2,137	0.3%	0.1%	
Northeastern University	6,243	6,908	7,664	7,718	8,005	28.2%	6.4%	
Tufts University	5,847	5,981	5,908	5,943	5,971	2.1%	0.5%	
Colgate University	8	8	8	11	12	50.0%	10.7%	
Cornell University	7,589	7,753	8,109	8,418	8,984	18.4%	4.3%	
Rensselaer Polytechnic Institute	1,118	1,098	1,226	1,267	1,287	15.1%	3.6%	
University of Rochester	4,801	4,823	5,102	5,282	5,453	13.6%	3.2%	
Wake Forest University	2,966	3,013	3,014	3,176	3,208	8.2%	2,0%	
Bucknell University	56	55	67	71	70	25.0%	5. 7 %	
Carnegie Mellon University	6,914	6,975	7,336	7,440	7,562	9.4%	2.3%	
Jniversity of Pennsylvania	13,288	13,244	13,651	14,009	14,803	11.4%	2.7%	
/illanova University	3,734	3,843	4,017	4,113	3,983	6.7%	1.6%	
Brown University	2,806	2,855	3,107	3,214	3,173	13.1%	3.1%	
/anderbilt University	5,684	5,716	5,707	5,963	6,245	9.9%	2.4%	
Rice University	2,809	2,962	3,021	3,132	3,293	17.2%	4.1%	
Southern Methodist University	5,232	5,218	5,337	5,170	5,114	-2.3%	-0.6%	·
Peer Totals	149,898	153,357	158,067	161,181	163,754	9.2%	2.2%	

Peer Comparison Masters Awarded (Source: IPEDS)

Institution	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	11 Year % Change	CAGR
Lehigh University	587	609	606	619	637	628	640	589	648	537	522	-11.1%	-1.2%
University of Miami	844	876	979	912	1,045	1,175	1,265	1,465	1,602	1,705	1,782	111.1%	7.8%
Georgetown University	2,346	2,726	2,838	2,965	3,209	3,370	3,623	3,750	3,899	4,091	4,072	73.6%	5.7%
Brown University	428	417	479	491	462	520	626	633	717	846	733	71.3%	5.5%
Carnegie Mellon University	1,963	2,145	2,242	2,408	3,020	2,811	2,947	2,943	3,336	3,133	3,256	65.9%	5.2%
Villanova University	763	938	1,036	1,070	1,080	1,144	1,109	1,279	1,200	1,305	1,261	65.3%	5.2%
Cornell University	1,953	2,163	2,150	2,289	2,328	2,428	2,510	2,717	2,730	2,778	3,156	61.6%	4.9%
Boston University	3,816	3,879	4,237	4,197	4,290	4,306	4,373	4,589	4,984	5,566	5,857	53.5%	4.4%
Wake Forest University	653	613	675	680	739	822	875	899	897	937	957	46.6%	3.9%
Rice University	619	619	594	659	719	711	792	849	874	898	906	46.4%	3.9%
Northwestern University	2,971	3,199	3,155	3,274	3,610	3,803	3,907	4,340	4,455	4,393	4,332	45.8%	3.8%
University of Rochester	1,026	1,192	1,103	1,181	1,259	1,338	1,278	1,292	1,279	1,368	1,403	36.7%	3.2%
University of Pennsylvania	3,168	3,452	3,565	3,767	3,713	3,702	3,777	3,836	3,950	4,185	4,289	35.4%	3.1%
Tufts University	943	1,110	1,108	1,201	1,248	1,184	1,286	1,261	1,305	1,281	1,262	33.8%	3.0%
Colgate University	3	4	4	7	4	4	5	2	1	5	4	33.3%	2.9%
George Washington University	3,664	3,929	3,883	4,210	4,376	4,223	4,109	4,363	4,774	4,597	4,780	30.5%	2.7%
University of Notre Dame	910	951	891	940	983	991	1,058	1,062	1,003	1,129	1,160	27.5%	2.5%
Northeastern University	2,268	2,803	3,122	3,449	2,119	1,919	2,062	2,225	2,563	2,652	2,886	27.2%	2.4%
Southern Methodist University	1,342	1,292	1,458	1,522	1,382	1,485	1,648	1,814	1,896	1,790	1,659	23.6%	2.1%
Emory University	1,249	1,284	1,351	1,342	1,317	1,426	1,518	1,507	1,639	1,588	1,539	23.2%	2.1%
Brandeis University	701	775	805	784	741	776	840	799	832	862	847	20.8%	1.9%
Vanderbilt University	1,280	1,252	1,432	1,421	1,416	1,496	1,421	1,487	1,477	1,382	1,512	18.1%	1.7%
Tulane University of Louisiana	1,288	1,247	1,380	1,527	1,526	1,547	1,568	1,495	1,601	1,728	1,509	17.2%	1.6%
Rensselaer Polytechnic Institute	374	416	359	390	389	408	408	429	407	368	390	4.3%	0.4%
Boston College	1,400	1,447	1,498	1,422	1,368	1,346	1,370	1,393	1,443	1,370	1,428	2.0%	0.2%
Bucknell University	46	43	34	29	26	22	36	21	16	18	19	-58.7%	-8.5%
Peer Totals	36,018	38,772	40,378	42,137	42,369	42,957	44,411	46,450	48,880	49,975	50,999	41.6%	3.5%

Where might we increase revenue?

\$580,429,250

Tuition as a source of growth in revenue

Increase enrollments – which students?

- Undergrads demographics present challenges + we want to enhance selectivity
- Graduate/professional students
- Summer students
- Executive education, non-credit courses

Increase tuition

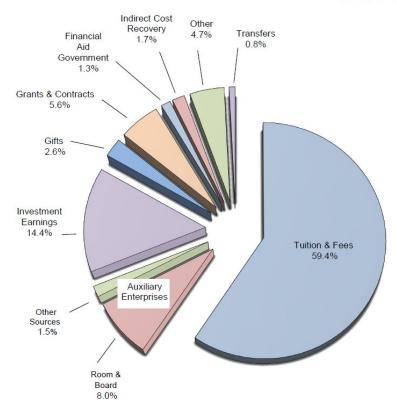
1% increase in UG tuition = ~\$2M in revenue

Auxiliaries should break even

Research

Financially, research is a net cost because indirect costs are under-recovered etc. But, some substitutional savings are possible - if faculty cover AY salary.

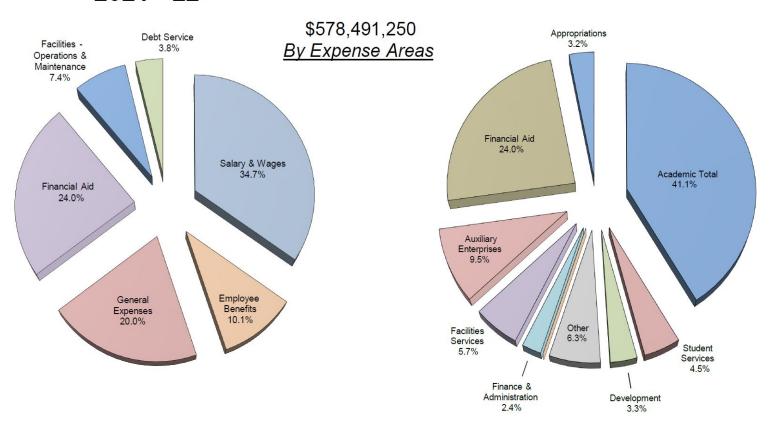
Fundraising/investment earnings

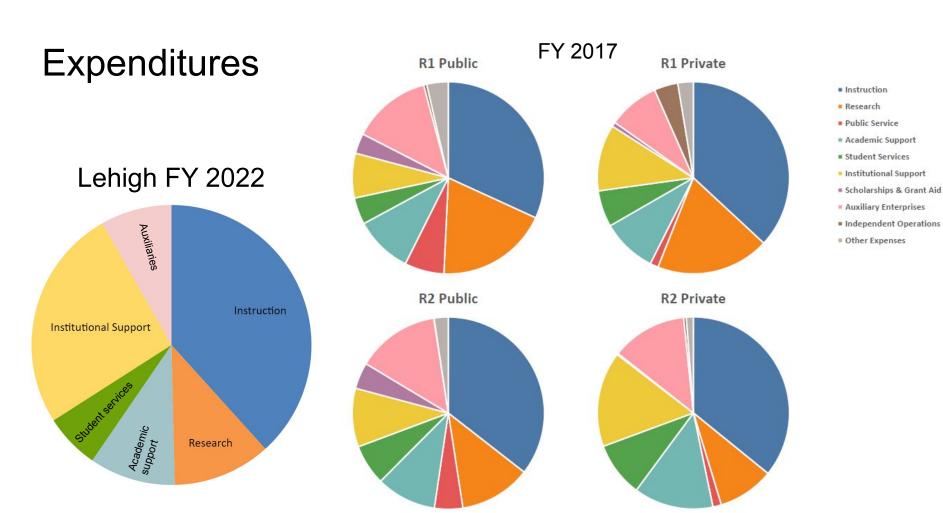


Expenditures

Operating Expenditure Distribution 2021 - 22

By Functional Areas





Budget model and process

Lehigh runs on a hybrid budget model

Largest part (~80%) incrementally budgeted and centrally allocated

- Most budgets increase by the same percentage as the salary pool
- Allocation of new funding comes from budget requests from units (colleges, student affairs, facilities, development)

In a few areas (research indirect costs, graduate tuition, summer tuition) we have created revenue streams which are distributed in a formulaic fashion.

• E.g., after meeting a target, incremental grad tuition revenue is split between colleges (80% and central budget 20%)

Restricted/designated funds (mostly endowment returns) increase according to endowment spending policy

Budget process

Summer

- Review past year's financial performance and peer data
- Establish budget process and timeline for the year
- Begin to build assumptions about revenue and expenses and initial modeling
- Request faculty hiring and new academic program plans

Fall

- Review predicted changes in revenue enrollments, tuition, auxiliaries, gifts, etc.
- Evaluate predicted changes in expenditures debt, inflation, capital costs, facilities operations costs, IT needs, contracts etc
- Begin discussions of budget parameters with finance committee
- Meet with units to discuss priorities, past performance

Spring

- Units make funding requests for review
- Model tuition, salary pool, benefits costs, capital and operating costs
- Get approval for budget parameters (tuition/cost of education, salary pool increase)
- Discuss and review requests (\$60M in requests for ~\$8M in funding)
- Approve allocations

Salaries

- We are in the process of doing a salary review for equity and competitiveness
- During this hiring season, we are collecting information about why we do not getting our first choice candidate salary or other factors.
- We are planning to collect better data about why faculty leave salary or other factors

Total salary expenditure (FY22) = \$200M (+\$60M EBs)

By who is paid

- Faculty salaries (including adjuncts, summer etc) = \$86M + \$26.5M EBs
- Staff salaries (exempt/non-exempt, hourly wages) = \$114M + \$33M EBs

By source of funds:

- Unrestricted (mostly tuition) = \$145M +\$45M EBs
 - \$71.4M in faculty salaries
- Auxiliary = \$4M + \$1M EBs
- Research = \$20M + \$3.5M EBs
 - \$5M in faculty salaries, \$0.7M AY salary
- Restricted, endowment, designated = \$30M + \$9M EBs
 - \$9.9M of this is faculty salary and \$6M is T/TT faculty salary

Lehigh Salary Increases

	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23
Base salary pool	3.50%	3.75%	1.50%	1.50%	2.50%	2.75%	3.00%	3.00%	2.75%	2.00%	2.00%	2.00%	2.00%	0.00%	1.50%	3.00%
Special meritorious adjustment	0.50%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.25%	0.50%	1.00%	1.00%	0.50%	0.00%	0.50%	1.00%
Total salary Pool Increase	4.00%	4.25%	1.50%	1.50%	2.50%	2.75%	3.00%	3.00%	3.00%	2.50%	3.00%	3.00%	2.50%	0.00%	2.00%	4.00%
Promotion and Tenure-Track Faculty Pool										0.50%	0.40%	0.50%	0.30%		0.30%	0.50%
										3.00%	3.40%	3.50%	2.80%	0.30%	2.30%	4.50%
										103.00%	103.40%	103.50%	102.80%	100.309	102.30%	104.50%
*Provided 1x Appreciation Allocation																
Social Security COLA	5.8%	0.0%	0.0%	3.6%	1.7%	1.5%	1.7%	0.0%	0.3%	2.0%	2.8%	1.6%	1.3%	5.9%		
CPI Average	3.8%	-0.4%	1.6%	3.2%	2.1%	1.5%	1.6%	0.1%	1.3%	2.1%	2.4%	1.8%	1.2%	4.7%		

Jan 2017 through Jan of 2022:

Lehigh faculty salary pool:+16.3% CPI increase: + 15.7% increase

<u>Pre-pandemic -</u>

Jan 2017 through Jan of 2020:

Lehigh faculty salary pool:+13.3%

CPI increase: +6.2%

Total salary expenditures

FY13-FY22

Salaries went from 44% to 50% of all expenditures Benefits went from 12% to 15% of all expenditures (Not counting financial aid as an expenditure)

Nationally faculty salaries have been flat

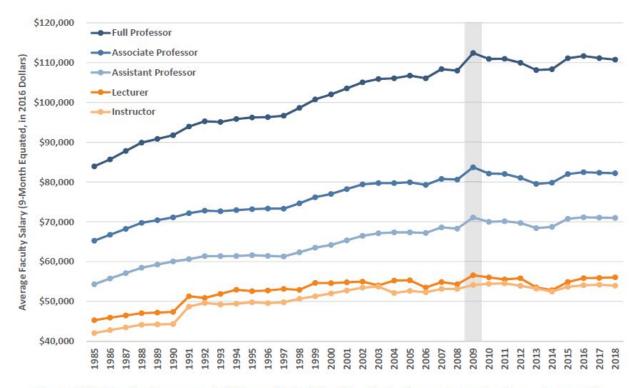


Figure 5.14. Trends in average inflation-adjusted faculty salaries by rank, equated to a nine-month contract, averaged across institution type by Carnegie classification and control. Source: IPEDS (2020).

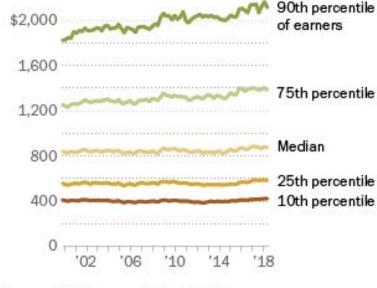
Americans' paychecks are bigger than 40 years ago, but their purchasing power has hardly budged

Average hourly wages in the U.S., seasonally adjusted



Wage increases in the U.S. rise to the top earners

Usual weekly earnings of employed, full-time wage and salary workers, not seasonally adjusted, in constant 2018 dollars



Source: U.S. Bureau of Labor Statistics.

PEW RESEARCH CENTER

A 1% increase in salary costs \$2.5M...How to make this work?

Increase revenue:

Increase discounted undergrad tuition rate by ~1.2% Increase number of students by 80

Decrease costs:

Reduce non-salary costs (where?)
Reduce staff/faculty ratio

Increase proportion of teaching faculty or adjuncts

Other ideas?

Where might we increase revenue?

\$580,429,250

Tuition as a source of growth in revenue

Increase enrollments - which students?

- Undergrads demographics present challenges + we want to enhance selectivity
- Graduate/professional students
- Summer students
- Executive education, non-credit courses

Increase tuition

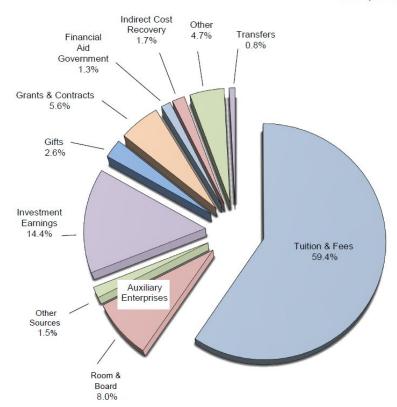
1% increase in UG tuition = ~\$2M in revenue

Auxiliaries should break even

Research

Financially, research is a net cost because indirect costs are under-recovered etc. But, some substitutional savings are possible - if faculty cover AY salary.

Fundraising/investment earnings



Questions?

